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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,064	12/20/2000	Robert Anderson	19930-000800US	1604
20350	7590	08/13/2004	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			PETKOVSEK, DANIEL J	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/747,064

Applicant(s)

ANDERSON ET AL.

Examiner

Daniel J Petkovsek

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on RCE filed July 29, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 4, 11, 14 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12, 13, 15-21, and 23-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on March 13, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/29/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is in response to the RCE (with amendment) received July 29, 2004. In accordance with the amendment, claims 1, 8, 9, and 25 have been amended, while claims 4, 11, 14, and 22 have been canceled.

#### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 29, 2004 has been entered.

#### ***Information Disclosure Statement***

2. The prior art document submitted by Applicant in the Information Disclosure Statements filed on July 29, 2004, has been considered and made of record (note attached copy of forms PTO-1449).

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 5-10, 12, 13, 15, 20, 21, and 23-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Husain et al. U.S.P. No. 6,453,083.

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Husain et al. U.S.P. No. 6,453,083 teaches (Fig. 13, column 12, lines 13-37) an optical routing apparatus 1310 comprising: an input port; a plurality of output ports (upper outputs in figure) configured to receive the input signal along a respective path that is substantially parallel to and opposite in direction the input, wherein at least two of the output ports lie in different parallel planes, each plane orthogonal to the input path; and an optical switching arrangement 1320 adapted to switch from the input to one of the plurality of outputs. Regarding independent claims 8 (inherent method in view of Husain et al '083) and 15, the different wavelength spectra are separated and routed accordingly. Regarding independent claim 25, the orthogonal separation between any one of the inputs and the distance to the outputs is not an integral multiple, since they are spaced further apart than an integral factor.

Regarding claims 2, 3, 9, 10, 20, 21, and 26 all path lengths are approximately equal and each input to each output differ by less than the confocal length. Regarding claim 7, the plurality of outputs can lie in a similar plane. Regarding claims 5, 6, 12, 13, 23, 24 and 27, moveable micro-mirrors exist for the reflection and optical switching properties as claimed, and the movement of a mirror is actuated in a linear manner.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Husain et al. U.S.P. No. 6,453,083 as applied to independent claim 15 above, and further in view of Solgaard et al. U.S.P. No. 6,097,859.

Husain et al. U.S.P. No. 6,453,083 teaches (Fig. 13, column 12, lines 13-37) an optical routing apparatus 1310 comprising: an input port; a plurality of output ports (upper outputs in figure) configured to receive the input signal along a respective path that is substantially parallel to and opposite in direction the input, wherein at least two of the output ports lie in different parallel planes, each plane orthogonal to the input path; and an optical switching arrangement 1320 adapted to switch from the input to one of the plurality of outputs. Husain et al. '083 does not explicitly teach that the dispersive element used for re-directing the optical signal is a *grating*.

Solgaard et al. U.S.P. No. 6,097,859 teaches (ABS, Figs. 1 and 2, column 3, line 54 through column 4, line 23) an optical routing apparatus 10 comprising: input ports 14 to provide an optical signal, a plurality of output ports 24, and optical switching functionality between these ports, the optical element in use being a diffraction grating (having some transmissive and some reflective properties).

Since Husain et al. '083 and Solgaard et al. '859 are both from the same field of endeavor, the purpose of using a well-known optical switching element, such as a grating, would have been recognized in the pertinent art of Husain et al. '083.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a number of optical reflective/transmissive elements in the optical

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switching/routing device of Husain et al. '083, for the purpose of increasing the capabilities of the device to route and/or pass optical signal through the system as desired.

Regarding claims 17-19, a *focusing lens* exists with the diffractive grating in the wavelength router of Solgaard et al. '859.

### ***Inventorship***

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Response to Arguments***

8. Applicant's arguments, see arguments, filed July 29, 2004, with respect to Solgaard et al. '859 have been fully considered and are persuasive. The rejections to Solgaard et al. '859 have been withdrawn.

9. Applicant's arguments filed July 29, 2004 have been fully considered but they are not persuasive. Applicant asserts that the current claim set is allowable over Husain et al. '083. This argument is not persuasive. See figure 13 of Husain et al. '083 and the 35 U.S.C. 102 (e) and 35 U.S.C. 103 (a) rejections above.

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*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, with respect to staggering input/output fibers in optical switching devices: PTO-892 form reference A to Laor, Herzel.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (571) 272-2355. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel Petkovsek  
August 11, 2004



Brian Healy  
Primary Examiner